

## SEQUENCE LISTING

<110> BATTAGLINO, PETER  
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 HAWKEN, DONALD R  
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<120> A NOVEL HUMAN G-PROTEIN COUPLED RECEPTOR, HGPRBMY8,  
 EXPRESSED HIGHLY IN BRAIN

<130> D0047NP

<140> TBA

<141> 2001-11-13

<150> 60/317166

<151> 2001-09-04

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<170> PatentIn Ver. 2.1

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<213> Homo sapiens

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<210> 2

<211> 508

<212> PRT

<213> Homo sapiens

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 Asn Leu Tyr Thr Val Tyr Ile Ile Lys Gly Tyr Trp Pro Leu Gly Ala  
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 Val Val Cys Asp Leu Trp Leu Ala Leu Asp Tyr Val Val Ser Asn Ala  
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 Ser Val Met Asn Leu Leu Ile Ile Ser Phe Asp Arg Tyr Phe Cys Val  
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 Thr Lys Pro Leu Thr Tyr Pro Ala Arg Arg Thr Thr Lys Met Ala Gly  
 145 150 155 160  
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 Ala Ile Leu Phe Trp Gln Phe Ile Val Gly Lys Arg Thr Val His Glu  
 180 185 190  
 Arg Glu Cys Tyr Ile Gln Phe Leu Ser Asn Pro Ala Val Thr Phe Gly  
 195 200 205  
 Thr Ala Ile Ala Ala Phe Tyr Leu Pro Val Val Ile Met Thr Val Leu  
 210 215 220  
 Tyr Ile His Ile Ser Leu Ala Ser Arg Ser Arg Val Arg Arg His Lys  
 225 230 235 240  
 Pro Glu Ser Arg Lys Glu Arg Lys Gly Lys Ser Leu Ser Phe Phe Lys  
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 Ala Pro Pro Val Lys Gln Asn Asn Asn Asn Ser Pro Lys Arg Ala Val  
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 Glu Val Lys Glu Glu Val Arg Asn Gly Lys Val Asp Asp Gln Pro Ser  
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 Ala Gln Thr Glu Ala Thr Gly Gln Gln Glu Glu Lys Glu Thr Ser Asn  
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 Thr Glu Ile Leu Pro Ala Gly Gln Gly Gln Ser Pro Ala His Pro Arg

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&lt;210&gt; 8

&lt;211&gt; 488

&lt;212&gt; PRT

&lt;213&gt; Caenorhabditis elegans

&lt;400&gt; 8

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Ser Ala Leu Phe Leu Leu Val Leu Trp Thr Ile Phe Ala Asn Ser Leu
          50              55              60
Val Phe Ile Val Leu Tyr Lys Asn Pro Arg Leu Gln Thr Val Pro Asn
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Leu Leu Val Gly Asn Leu Ala Phe Ser Asp Leu Ala Leu Gly Leu Ile
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Val Leu Pro Leu Ser Ser Val Tyr Ala Ile Ala Gly Glu Trp Val Phe
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 Ala Gly Ile Met Ile Leu Ser Val Trp Ile Ser Ser Ala Leu Ile Ser  
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 Leu Ala Pro Leu Leu Gly Trp Lys Gln Thr Ala Gln Thr Pro Asn Leu  
 180 185 190  
 Ile Tyr Glu Lys Asn Asn Thr Val Arg Gln Cys Thr Phe Leu Asp Leu  
 195 200 205  
 Pro Ser Tyr Thr Val Tyr Ser Ala Thr Gly Ser Phe Phe Ile Pro Thr  
 210 215 220  
 Leu Leu Met Phe Phe Val Tyr Phe Lys Ile Tyr Gln Ala Phe Ala Lys  
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 His Arg Ala Arg Gln Ile Tyr Arg Gln Lys Val Ile Arg Lys His Ile  
 245 250 255  
 Glu Ser Thr Ile Leu His Glu Ile Ser His Val Leu Pro Thr Ser Asp  
 260 265 270  
 Glu Phe Ala Lys Glu Glu Glu Glu Glu Asp Ser Glu Ser Ser Gly  
 275 280 285  
 Gln Val Glu Asn Gly Leu Gly Asn Gly Asn Asp Ala Ile Ile Glu Glu  
 290 295 300  
 Asp Glu Cys Glu Asp Glu Asp Ser Asp Glu Lys Arg Asp Asp His Thr  
 305 310 315 320  
 Ser Met Thr Thr Val Thr Ala Thr Val Thr Gly Pro Thr Glu Ala Pro  
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 Tyr Met Lys Arg Glu Ala Lys Ile Ser Lys Ser Val Pro Ile Glu Lys  
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 Ala Ile Ser Tyr Glu Lys Val Lys Arg His Lys Asn Arg Lys Glu Arg  
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 Ile Tyr Arg Lys Ser Leu Gln Arg Lys Pro Lys Ala Ile Ser Ala Ala  
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 245 250 255  
 Ala Val Phe His Lys Arg Ala Asn Gly Asp Ala Val Ser Ala Glu Trp  
 260 265 270  
 Lys Arg Gly Tyr Lys Phe Lys Pro Ser Ser Pro Cys Ala Asn Gly Ala  
 275 280 285  
 Val Arg His Gly Glu Glu Met Glu Ser Leu Glu Ile Ile Glu Val Asn  
 290 295 300  
 Ser Asn Ser Lys Thr His Leu Pro Leu Pro Asn Thr Pro Gln Ser Ser  
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 Ala Leu Ala Arg Glu Arg Lys Thr Val Lys Thr Leu Gly Ile Ile Met  
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Cys Ala Val Leu Gly Asn Ala Cys Val Val Ala Ala Ile Ala Leu Glu  
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 Thr Asp Leu Met Val Ser Val Leu Val Leu Pro Met Ala Ala Leu Tyr  
 85 90 95  
 Gln Val Leu Asn Lys Trp Thr Leu Gly Gln Val Thr Cys Asp Leu Phe  
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 115 120 125  
 Ala Ile Ala Leu Asp Arg Tyr Trp Ala Ile Thr Asp Pro Ile Asp Tyr  
 130 135 140  
 Val Asn Lys Arg Thr Pro Arg Arg Ala Ala Ala Leu Ile Ser Leu Thr  
 145 150 155 160  
 Trp Leu Ile Gly Phe Leu Ile Ser Ile Pro Pro Met Leu Gly Trp Arg  
 165 170 175  
 Ala Pro Glu Asp Arg Ser Asn Pro Asn Glu Cys Thr Ile Ser Lys Asp  
 180 185 190  
 His Gly Tyr Thr Ile Tyr Ser Thr Phe Gly Ala Phe Tyr Ile Pro Leu  
 195 200 205  
 Leu Leu Met Leu Val Leu Tyr Gly Arg Ile Phe Arg Ala Ala Arg Phe  
 210 215 220  
 Arg Ile Arg Lys Thr Val Lys Lys Val Glu Lys Lys Gly Ala Gly Thr  
 225 230 235 240  
 Ser Phe Gly Thr Ser Ser Ala Pro Pro Pro Lys Lys Ser Leu Asn Gly  
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 Gln Pro Gly Ser Gly Asp Cys Arg Arg Ser Ala Glu Asn Arg Ala Val  
 260 265 270  
 Gly Thr Pro Cys Ala Asn Gly Ala Val Arg Gln Gly Glu Asp Asp Ala  
 275 280 285  
 Thr Leu Glu Val Ile Glu Val His Arg Val Gly Asn Ser Lys Gly Asp  
 290 295 300  
 Leu Pro Leu Pro Ser Glu Ser Gly Ala Thr Ser Tyr Val Pro Ala Cys  
 305 310 315 320  
 Leu Glu Arg Lys Asn Glu Arg Thr Ala Glu Ala Lys Arg Lys Met Ala  
 325 330 335  
 Leu Ala Arg Glu Arg Lys Thr Val Lys Thr Leu Gly Ile Ile Met Gly  
 340 345 350  
 Thr Phe Ile Leu Cys Trp Leu Pro Phe Phe Ile Val Ala Leu Val Leu  
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Pro Phe Cys Glu Ser Ser Cys His Met Pro Glu Leu Leu Gly Ala Ile  
370 375 380

Ile Asn Trp Leu Gly Tyr Ser Asn Ser Leu Leu Asn Pro Val Ile Tyr  
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Ala Tyr Phe Asn Lys Asp Phe Gln Asn Ala Phe Lys Lys Ile Ile Lys  
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Cys Lys Phe Cys Arg  
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<210> 11

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<213> Fugu rubripes

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35 40 45

Ser Leu Phe Leu Gly Ala Leu Ile Leu Cys Ser Ile Phe Gly Asn Ser  
50 55 60

Cys Val Val Ala Ala Ile Ala Leu Glu Arg Ser Leu Gln Asn Val Ala  
65 70 75 80

Asn Tyr Leu Ile Gly Ser Leu Ala Val Thr Asp Leu Met Val Ser Val  
85 90 95

Leu Val Leu Pro Met Ala Ala Leu Tyr Gln Val Leu Asn Lys Trp Thr  
100 105 110

Leu Gly Gln Asp Ile Cys Asp Leu Phe Ile Ala Leu Asp Val Leu Cys  
115 120 125

Cys Thr Ser Ser Ile Leu His Leu Cys Ala Ile Ala Leu Asp Arg Tyr  
130 135 140

Trp Ala Ile Thr Asp Pro Ile Asp Tyr Val Asn Lys Arg Thr Pro Arg  
145 150 155 160

Arg Ala Ala Val Leu Ile Ser Val Thr Trp Leu Ile Gly Phe Ser Ile  
165 170 175

Ser Ile Pro Pro Met Leu Gly Trp Arg Ser Ala Glu Asp Arg Ala Asn  
180 185 190

Pro Asp Ala Cys Ile Ile Ser Gln Asp Pro Gly Tyr Thr Ile Tyr Ser  
195 200 205

Thr Phe Gly Ala Phe Tyr Ile Pro Leu Ile Leu Met Leu Val Leu Tyr  
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 Gly Arg Ile Phe Lys Ala Ala Arg Phe Arg Ile Arg Lys Thr Val Lys  
 225 230 235 240  
 Lys Thr Glu Lys Ala Lys Ala Ser Asp Met Cys Leu Thr Leu Ser Pro  
 245 250 255  
 Ala Val Phe His Lys Arg Ala Asn Gly Asp Ala Val Ser Ala Glu Trp  
 260 265 270  
 Lys Arg Gly Tyr Lys Phe Lys Pro Ser Ser Pro Cys Ala Asn Gly Ala  
 275 280 285  
 Val Arg His Gly Glu Glu Met Glu Ser Leu Glu Ile Ile Glu Val Asn  
 290 295 300  
 Ser Asn Ser Lys Thr His Leu Pro Leu Pro Asn Thr Pro Gln Ser Ser  
 305 310 315 320  
 Ser His Glu Asn Ile Asn Glu Lys Thr Thr Gly Thr Arg Arg Lys Ile  
 325 330 335  
 Ala Leu Ala Arg Glu Arg Lys Thr Val Lys Thr Leu Gly Ile Ile Met  
 340 345 350  
 Gly Thr Phe Ile Phe Cys Trp Leu Pro Phe Phe Ile Val Ala Leu Val  
 355 360 365  
 Leu Pro Phe Cys Ala Glu Asn Cys Tyr Met Pro Glu Trp Leu Gly Ala  
 370 375 380  
 Val Ile Asn Trp Leu Gly Tyr Ser Asn Ser Leu Leu Asn Pro Ile Ile  
 385 390 395 400  
 Tyr Ala Tyr Phe Asn Lys Asp Phe Gln Ser Ala Phe Lys Lys Ile Leu  
 405 410 415  
 Arg Cys Lys Phe His Arg His  
 420

&lt;210&gt; 12

&lt;211&gt; 509

&lt;212&gt; PRT

<213> *Lymnaea stagnalis*

&lt;400&gt; 12

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 35 40 45

Ser Tyr Gly Leu Thr Gly Gln Phe Ile Asn Gly Ser His Ser Ser Arg

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Asp	Asp	Arg	Tyr	Trp	Ser	Leu	Thr	Val	Tyr	Ser	His	Glu	His	Leu	Val
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Leu	Thr	Ser	Val	Ile	Leu	Gly	Leu	Phe	Val	Leu	Cys	Cys	Ile	Ile	Gly
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225					230					235					240
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		275				280						285			
Lys	Phe	Gln	Met	Thr	Lys	Ala	Arg	Leu	Lys	Thr	Glu	Glu	Thr	Thr	Leu
	290					295					300				
Val	Ala	Ser	Pro	Lys	Thr	Glu	Tyr	Ser	Val	Val	Ser	Asp	Cys	Asn	Gly
305					310					315					320
Cys	Asn	Ser	Pro	Asp	Ser	Thr	Thr	Glu	Lys	Lys	Lys	Arg	Arg	Ala	Pro
			325						330					335	
Phe	Lys	Ser	Tyr	Gly	Cys	Ser	Pro	Arg	Pro	Glu	Arg	Lys	Lys	Asn	Arg
			340					345						350	
Ala	Lys	Lys	Leu	Pro	Glu	Asn	Ala	Asn	Gly	Val	Asn	Ser	Asn	Ser	Ser
		355				360						365			

Ser Ser Glu Arg Leu Lys Gln Ile Gln Ile Glu Thr Ala Glu Ala Phe  
 370 375 380  
 Ala Asn Gly Cys Ala Glu Glu Ala Ser Ile Ala Met Leu Glu Arg Gln  
 385 390 395 400  
 Cys Asn Asn Gly Lys Lys Ile Ser Ser Asn Asp Thr Pro Tyr Ser Arg  
 405 410 415  
 Thr Arg Glu Lys Leu Glu Leu Lys Arg Glu Arg Lys Ala Ala Arg Thr  
 420 425 430  
 Leu Ala Ile Ile Thr Gly Ala Phe Leu Ile Cys Trp Leu Pro Phe Phe  
 435 440 445  
 Ile Ile Ala Leu Ile Gly Pro Phe Val Asp Pro Glu Gly Ile Pro Pro  
 450 455 460  
 Phe Ala Arg Ser Phe Val Leu Trp Leu Gly Tyr Phe Asn Ser Leu Leu  
 465 470 475 480  
 Asn Pro Ile Ile Tyr Thr Ile Phe Ser Pro Glu Phe Arg Ser Ala Phe  
 485 490 495  
 Gln Lys Ile Leu Phe Gly Lys Tyr Arg Arg Gly His Arg  
 500 505

<210> 13  
 <211> 572  
 <212> PRT  
 <213> Homo sapiens

<400> 13  
 Met Thr Phe Arg Asp Leu Leu Ser Val Ser Phe Glu Gly Pro Arg Pro  
 1 5 10 15  
 Asp Ser Ser Ala Gly Gly Ser Ser Ala Gly Gly Gly Gly Gly Ser Ala  
 20 25 30  
 Gly Gly Ala Ala Pro Ser Glu Gly Pro Ala Val Gly Gly Val Pro Gly  
 35 40 45  
 Gly Ala Gly Gly Gly Gly Gly Val Val Gly Ala Gly Ser Gly Glu Asp  
 50 55 60  
 Asn Arg Ser Ser Ala Gly Glu Pro Gly Ser Ala Gly Ala Gly Gly Asp  
 65 70 75 80  
 Val Asn Gly Thr Ala Ala Val Gly Gly Leu Val Val Ser Ala Gln Gly  
 85 90 95  
 Val Gly Val Gly Val Phe Leu Ala Ala Phe Ile Leu Met Ala Val Ala  
 100 105 110  
 Gly Asn Leu Leu Val Ile Leu Ser Val Ala Cys Asn Arg His Leu Gln  
 115 120 125  
 Thr Val Thr Asn Tyr Phe Ile Val Asn Leu Ala Val Ala Asp Leu Leu

130					135					140					
Leu	Ser	Ala	Thr	Val	Leu	Pro	Phe	Ser	Ala	Thr	Met	Glu	Val	Leu	Gly
145					150					155					160
Phe	Trp	Ala	Phe	Gly	Arg	Ala	Phe	Cys	Asp	Val	Trp	Ala	Ala	Val	Asp
				165					170						175
Val	Leu	Cys	Cys	Thr	Ala	Ser	Ile	Leu	Ser	Leu	Cys	Thr	Ile	Ser	Val
			180					185					190		
Asp	Arg	Tyr	Val	Gly	Val	Arg	His	Ser	Leu	Lys	Tyr	Pro	Ala	Ile	Met
		195					200					205			
Thr	Glu	Arg	Lys	Ala	Ala	Ala	Ile	Leu	Ala	Leu	Leu	Trp	Val	Val	Ala
	210					215					220				
Leu	Val	Val	Ser	Val	Gly	Pro	Leu	Leu	Gly	Trp	Lys	Glu	Pro	Val	Pro
225					230					235					240
Pro	Asp	Glu	Arg	Phe	Cys	Gly	Ile	Thr	Glu	Glu	Ala	Gly	Tyr	Ala	Val
				245					250					255	
Phe	Ser	Ser	Val	Cys	Ser	Phe	Tyr	Leu	Pro	Met	Ala	Val	Ile	Val	Val
			260					265					270		
Met	Tyr	Cys	Arg	Val	Tyr	Val	Val	Ala	Arg	Ser	Thr	Thr	Arg	Ser	Leu
		275					280					285			
Glu	Ala	Gly	Val	Lys	Arg	Glu	Arg	Gly	Lys	Ala	Ser	Glu	Val	Val	Leu
	290					295					300				
Arg	Ile	His	Cys	Arg	Gly	Ala	Ala	Thr	Gly	Ala	Asp	Gly	Ala	His	Gly
305					310					315					320
Met	Arg	Ser	Ala	Lys	Gly	His	Thr	Phe	Arg	Ser	Ser	Leu	Ser	Val	Arg
				325					330					335	
Leu	Leu	Lys	Phe	Ser	Arg	Glu	Lys	Lys	Ala	Ala	Lys	Thr	Leu	Ala	Ile
			340					345					350		
Val	Val	Gly	Val	Phe	Val	Leu	Cys	Trp	Phe	Pro	Phe	Phe	Phe	Val	Leu
		355					360					365			
Pro	Leu	Gly	Ser	Leu	Phe	Pro	Gln	Leu	Lys	Pro	Ser	Glu	Gly	Val	Phe
	370					375					380				
Lys	Val	Ile	Phe	Trp	Leu	Gly	Tyr	Phe	Asn	Ser	Cys	Val	Asn	Pro	Leu
385					390					395					400
Ile	Tyr	Pro	Cys	Ser	Ser	Arg	Glu	Phe	Lys	Arg	Ala	Phe	Leu	Arg	Leu
			405						410					415	
Leu	Arg	Cys	Gln	Cys	Arg	Arg	Arg	Arg	Arg	Arg	Arg	Pro	Leu	Trp	Arg
			420				425					430			
Val	Tyr	Gly	His	His	Trp	Arg	Ala	Ser	Thr	Ser	Gly	Leu	Arg	Gln	Asp
		435					440					445			

Cys Ala Pro Ser Ser Gly Asp Ala Pro Pro Gly Ala Pro Leu Ala Leu  
450 455 460

Thr Ala Leu Pro Asp Pro Asp Pro Glu Pro Pro Gly Thr Pro Glu Met  
465 470 475 480

Gln Ala Pro Val Ala Ser Arg Arg Lys Pro Pro Ser Ala Phe Arg Glu  
485 490 495

Trp Arg Leu Leu Gly Pro Phe Arg Arg Pro Thr Thr Gln Leu Arg Ala  
500 505 510

Lys Val Ser Ser Leu Ser His Lys Ile Arg Ala Gly Gly Ala Gln Arg  
515 520 525

Ala Glu Ala Ala Cys Ala Gln Arg Ser Glu Val Glu Ala Val Ser Leu  
530 535 540

Gly Val Pro His Glu Val Ala Glu Gly Ala Thr Cys Gln Ala Tyr Glu  
545 550 555 560

Leu Ala Asp Tyr Ser Asn Leu Arg Glu Thr Asp Ile  
565 570

<210> 14

<211> 562

<212> PRT

<213> Mus musculus

<400> 14

Met Thr Phe Arg Asp Ile Leu Ser Val Thr Phe Glu Gly Pro Arg Ala  
1 5 10 15

Ser Ser Ser Thr Gly Gly Ser Gly Ala Gly Gly Gly Ala Gly Thr Val  
20 25 30

Gly Pro Glu Gly Pro Ala Val Gly Gly Val Pro Gly Ala Thr Gly Gly  
35 40 45

Ser Ala Val Val Gly Thr Gly Ser Gly Glu Asp Asn Gln Ser Ser Thr  
50 55 60

Ala Glu Ala Gly Ala Ala Ala Ser Gly Glu Val Asn Gly Ser Ala Ala  
65 70 75 80

Val Gly Gly Leu Val Val Ser Ala Gln Gly Val Gly Val Gly Val Phe  
85 90 95

Leu Ala Ala Phe Ile Leu Thr Ala Val Ala Gly Asn Leu Leu Val Ile  
100 105 110

Leu Ser Val Ala Cys Asn Arg His Leu Gln Thr Val Thr Asn Tyr Phe  
115 120 125

Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Ser Ala Ala Val Leu  
130 135 140

Pro Phe Ser Ala Thr Met Glu Val Leu Gly Phe Trp Pro Phe Gly Arg



145		150		155		160
Thr Phe Cys Asp Val Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala						
		165		170		175
Ser Ile Leu Ser Leu Cys Thr Ile Ser Val Asp Arg Tyr Val Gly Val						
		180		185		190
Arg His Ser Leu Lys Tyr Pro Ala Ile Met Thr Glu Arg Lys Ala Ala						
		195		200		205
Ala Ile Leu Ala Leu Leu Trp Ala Val Ala Leu Val Val Ser Val Gly						
		210		215		220
Pro Leu Leu Gly Trp Lys Glu Pro Val Pro Pro Asp Glu Arg Phe Cys						
		225		230		235
Gly Ile Thr Glu Glu Val Gly Tyr Ala Ile Phe Ser Ser Val Cys Ser						
		245		250		255
Phe Tyr Leu Pro Met Ala Val Ile Val Val Met Tyr Cys Arg Val Tyr						
		260		265		270
Val Val Ala Arg Ser Thr Thr Arg Ser Leu Glu Ala Gly Ile Lys Arg						
		275		280		285
Glu Pro Gly Lys Ala Ser Glu Val Val Leu Arg Ile His Cys Arg Gly						
		290		295		300
Ala Ala Thr Ser Ala Lys Gly Asn Pro Gly Thr Gln Ser Ser Lys Gly						
		305		310		315
His Thr Leu Arg Ser Ser Leu Ser Val Arg Leu Leu Lys Phe Ser Arg						
		325		330		335
Glu Lys Lys Ala Ala Lys Thr Leu Ala Ile Val Val Gly Val Phe Val						
		340		345		350
Leu Cys Trp Phe Pro Phe Phe Phe Val Leu Pro Leu Gly Ser Leu Phe						
		355		360		365
Pro Gln Leu Lys Pro Ser Glu Gly Val Phe Lys Val Ile Phe Trp Leu						
		370		375		380
Gly Tyr Phe Asn Ser Cys Val Asn Pro Leu Ile Tyr Pro Cys Ser Ser						
		385		390		395
Arg Glu Phe Lys Arg Ala Phe Leu Arg Leu Leu Arg Cys Gln Cys Arg						
		405		410		415
Arg Arg Arg Arg Arg Leu Trp Pro Ser Leu Arg Pro Pro Leu Ala Ser						
		420		425		430
Leu Asp Arg Arg Pro Ala Leu Arg Leu Cys Pro Gln Pro Ala His Arg						
		435		440		445
Thr Pro Arg Gly Ser Pro Ser Pro His Cys Thr Pro Arg Pro Gly Leu						
		450		455		460

Arg Arg His Ala Gly Gly Ala Gly Phe Gly Leu Arg Pro Ser Lys Ala  
 465 470 475 480  
 Ser Leu Arg Leu Arg Glu Trp Arg Leu Leu Gly Pro Leu Gln Arg Pro  
 485 490 495  
 Thr Thr Gln Leu Arg Ala Lys Val Ser Ser Leu Ser His Lys Phe Arg  
 500 505 510  
 Ser Gly Gly Ala Arg Arg Ala Glu Thr Ala Cys Ala Leu Arg Ser Glu  
 515 520 525  
 Val Glu Ala Val Ser Leu Asn Val Pro Gln Asp Gly Ala Glu Ala Val  
 530 535 540  
 Ile Cys Gln Ala Tyr Glu Pro Gly Asp Leu Ser Asn Leu Arg Glu Thr  
 545 550 555 560  
 Asp Ile

<210> 15  
 <211> 499  
 <212> PRT  
 <213> Homo sapiens

<400> 15  
 Met Val Phe Leu Ser Gly Asn Ala Ser Asp Ser Ser Asn Cys Thr Gln  
 1 5 10 15  
 Pro Pro Ala Pro Val Asn Ile Ser Lys Ala Ile Leu Leu Gly Val Ile  
 20 25 30  
 Leu Gly Gly Leu Ile Leu Phe Gly Val Leu Gly Asn Ile Leu Val Ile  
 35 40 45  
 Leu Ser Val Ala Cys His Arg His Leu His Ser Val Thr His Tyr Tyr  
 50 55 60  
 Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Thr Ser Thr Val Leu  
 65 70 75 80  
 Pro Phe Ser Ala Ile Phe Glu Val Leu Gly Tyr Trp Ala Phe Gly Arg  
 85 90 95  
 Val Phe Cys Asn Ile Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala  
 100 105 110  
 Ser Ile Met Gly Leu Cys Ile Ile Ser Ile Asp Arg Tyr Ile Gly Val  
 115 120 125  
 Ser Tyr Pro Leu Arg Tyr Pro Thr Ile Val Thr Gln Arg Arg Gly Leu  
 130 135 140  
 Met Ala Leu Leu Cys Val Trp Ala Leu Ser Leu Val Ile Ser Ile Gly  
 145 150 155 160  
 Pro Leu Phe Gly Trp Arg Gln Pro Ala Pro Glu Asp Glu Thr Ile Cys

165										170					175				
Gln	Ile	Asn	Glu	Glu	Pro	Gly	Tyr	Val	Leu	Phe	Ser	Ala	Leu	Gly	Ser				
			180					185					190						
Phe	Tyr	Leu	Pro	Leu	Ala	Ile	Ile	Leu	Val	Met	Tyr	Cys	Arg	Val	Tyr				
		195					200					205							
Val	Val	Ala	Lys	Arg	Glu	Ser	Arg	Gly	Leu	Lys	Ser	Gly	Leu	Lys	Thr				
	210					215					220								
Asp	Lys	Ser	Asp	Ser	Glu	Gln	Val	Thr	Leu	Arg	Ile	His	Arg	Lys	Asn				
225					230					235					240				
Ala	Pro	Ala	Gly	Gly	Ser	Gly	Met	Ala	Ser	Ala	Lys	Thr	Lys	Thr	His				
			245						250					255					
Phe	Ser	Val	Arg	Leu	Leu	Lys	Phe	Ser	Arg	Glu	Lys	Lys	Ala	Ala	Lys				
			260					265					270						
Thr	Leu	Gly	Ile	Val	Val	Gly	Cys	Phe	Val	Leu	Cys	Trp	Leu	Pro	Phe				
	275						280					285							
Phe	Leu	Val	Met	Pro	Ile	Gly	Ser	Phe	Phe	Pro	Asp	Phe	Lys	Pro	Ser				
	290					295					300								
Glu	Thr	Val	Phe	Lys	Ile	Val	Phe	Trp	Leu	Gly	Tyr	Leu	Asn	Ser	Cys				
305					310					315					320				
Ile	Asn	Pro	Ile	Ile	Tyr	Pro	Cys	Ser	Ser	Gln	Glu	Phe	Lys	Lys	Ala				
			325					330						335					
Phe	Gln	Asn	Val	Leu	Arg	Ile	Gln	Cys	Leu	Arg	Arg	Lys	Gln	Ser	Ser				
			340					345					350						
Lys	His	Ala	Leu	Gly	Tyr	Thr	Leu	His	Pro	Pro	Ser	Gln	Ala	Val	Glu				
		355					360					365							
Gly	Gln	His	Lys	Asp	Met	Val	Arg	Ile	Pro	Val	Gly	Ser	Arg	Glu	Thr				
	370					375					380								
Phe	Tyr	Arg	Ile	Ser	Lys	Thr	Asp	Gly	Val	Cys	Glu	Trp	Lys	Phe	Phe				
385					390					395					400				
Ser	Ser	Met	Pro	Arg	Gly	Ser	Ala	Arg	Ile	Thr	Val	Ser	Lys	Asp	Gln				
				405				410						415					
Ser	Ser	Cys	Thr	Thr	Ala	Arg	Thr	Lys	Ser	Arg	Ser	Val	Thr	Arg	Leu				
			420					425					430						
Glu	Cys	Ser	Gly	Met	Ile	Leu	Ala	His	Cys	Asn	Leu	Arg	Leu	Pro	Gly				
		435					440					445							
Ser	Arg	Asp	Ser	Pro	Ala	Ser	Ala	Ser	Gln	Ala	Ala	Gly	Thr	Thr	Gly				
	450					455				460									
Asp	Val	Pro	Pro	Gly	Arg	Arg	His	Gln	Ala	Gln	Leu	Ile	Phe	Val	Phe				
465					470					475					480				

Leu Val Glu Thr Gly Phe His His Val Gly Gln Asp Asp Leu Asp Leu  
 485 490 495

Leu Thr Ser

<210> 16

<211> 429

<212> PRT

<213> Homo sapiens

<400> 16

Met Val Phe Leu Ser Gly Asn Ala Ser Asp Ser Ser Asn Cys Thr Gln  
 1 5 10 15

Pro Pro Ala Pro Val Asn Ile Ser Lys Ala Ile Leu Leu Gly Val Ile  
 20 25 30

Leu Gly Gly Leu Ile Leu Phe Gly Val Leu Gly Asn Ile Leu Val Ile  
 35 40 45

Leu Ser Val Ala Cys His Arg His Leu His Ser Val Thr His Tyr Tyr  
 50 55 60

Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Thr Ser Thr Val Leu  
 65 70 75 80

Pro Phe Ser Ala Ile Phe Glu Val Leu Gly Tyr Trp Ala Phe Gly Arg  
 85 90 95

Val Phe Cys Asn Ile Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala  
 100 105 110

Ser Ile Met Gly Leu Cys Ile Ile Ser Ile Asp Arg Tyr Ile Gly Val  
 115 120 125

Ser Tyr Pro Leu Arg Tyr Pro Thr Ile Val Thr Gln Arg Arg Gly Leu  
 130 135 140

Met Ala Leu Leu Cys Val Trp Ala Leu Ser Leu Val Ile Ser Ile Gly  
 145 150 155 160

Pro Leu Phe Gly Trp Arg Gln Pro Ala Pro Glu Asp Glu Thr Ile Cys  
 165 170 175

Gln Ile Asn Glu Glu Pro Gly Tyr Val Leu Phe Ser Ala Leu Gly Ser  
 180 185 190

Phe Tyr Leu Pro Leu Ala Ile Ile Leu Val Met Tyr Cys Arg Val Tyr  
 195 200 205

Val Val Ala Lys Arg Glu Ser Arg Gly Leu Lys Ser Gly Leu Lys Thr  
 210 215 220

Asp Lys Ser Asp Ser Glu Gln Val Thr Leu Arg Ile His Arg Lys Asn  
 225 230 235 240

Ala Pro Ala Gly Gly Ser Gly Met Ala Ser Ala Lys Thr Lys Thr His

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                245                250                255
Phe Ser Val Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys
                260                265                270

Thr Leu Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe
                275                280                285

Phe Leu Val Met Pro Ile Gly Ser Phe Phe Pro Asp Phe Lys Pro Ser
                290                295                300

Glu Thr Val Phe Lys Ile Val Phe Trp Leu Gly Tyr Leu Asn Ser Cys
305                310                315                320

Ile Asn Pro Ile Ile Tyr Pro Cys Ser Ser Gln Glu Phe Lys Lys Ala
                325                330                335

Phe Gln Asn Val Leu Arg Ile Gln Cys Leu Arg Arg Lys Gln Ser Ser
                340                345                350

Lys His Ala Leu Gly Tyr Thr Leu His Pro Pro Ser Gln Ala Val Glu
                355                360                365

Gly Gln His Lys Asp Met Val Arg Ile Pro Val Gly Ser Arg Glu Thr
370                375                380

Phe Tyr Arg Ile Ser Lys Thr Asp Gly Val Cys Glu Trp Lys Phe Phe
385                390                395                400

Ser Ser Met Pro Arg Gly Ser Ala Arg Ile Thr Val Ser Lys Asp Gln
                405                410                415

Ser Ser Cys Thr Thr Ala Arg Gly His Thr Pro Met Thr
                420                425

<210> 17
<211> 455
<212> PRT
<213> Homo sapiens

<400> 17
Met Val Phe Leu Ser Gly Asn Ala Ser Asp Ser Ser Asn Cys Thr Gln
  1                5                10                15

Pro Pro Ala Pro Val Asn Ile Ser Lys Ala Ile Leu Leu Gly Val Ile
                20                25                30

Leu Gly Gly Leu Ile Leu Phe Gly Val Leu Gly Asn Ile Leu Val Ile
                35                40                45

Leu Ser Val Ala Cys His Arg His Leu His Ser Val Thr His Tyr Tyr
  50                55                60

Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Thr Ser Thr Val Leu
  65                70                75                80

Pro Phe Ser Ala Ile Phe Glu Val Leu Gly Tyr Trp Ala Phe Gly Arg
                85                90                95

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Val Phe Cys Asn Ile Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala  
 100 105 110  
 Ser Ile Met Gly Leu Cys Ile Ile Ser Ile Asp Arg Tyr Ile Gly Val  
 115 120 125  
 Ser Tyr Pro Leu Arg Tyr Pro Thr Ile Val Thr Gln Arg Arg Gly Leu  
 130 135 140  
 Met Ala Leu Leu Cys Val Trp Ala Leu Ser Leu Val Ile Ser Ile Gly  
 145 150 155 160  
 Pro Leu Phe Gly Trp Arg Gln Pro Ala Pro Glu Asp Glu Thr Ile Cys  
 165 170 175  
 Gln Ile Asn Glu Glu Pro Gly Tyr Val Leu Phe Ser Ala Leu Gly Ser  
 180 185 190  
 Phe Tyr Leu Pro Leu Ala Ile Ile Leu Val Met Tyr Cys Arg Val Tyr  
 195 200 205  
 Val Val Ala Lys Arg Glu Ser Arg Gly Leu Lys Ser Gly Leu Lys Thr  
 210 215 220  
 Asp Lys Ser Asp Ser Glu Gln Val Thr Leu Arg Ile His Arg Lys Asn  
 225 230 235 240  
 Ala Pro Ala Gly Gly Ser Gly Met Ala Ser Ala Lys Thr Lys Thr His  
 245 250 255  
 Phe Ser Val Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys  
 260 265 270  
 Thr Leu Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe  
 275 280 285  
 Phe Leu Val Met Pro Ile Gly Ser Phe Phe Pro Asp Phe Lys Pro Ser  
 290 295 300  
 Glu Thr Val Phe Lys Ile Val Phe Trp Leu Gly Tyr Leu Asn Ser Cys  
 305 310 315 320  
 Ile Asn Pro Ile Ile Tyr Pro Cys Ser Ser Gln Glu Phe Lys Lys Ala  
 325 330 335  
 Phe Gln Asn Val Leu Arg Ile Gln Cys Leu Cys Arg Lys Gln Ser Ser  
 340 345 350  
 Lys His Ala Leu Gly Tyr Thr Leu His Pro Pro Ser Gln Ala Val Glu  
 355 360 365  
 Gly Gln His Lys Asp Met Val Arg Ile Pro Val Gly Ser Arg Glu Thr  
 370 375 380  
 Phe Tyr Arg Ile Ser Lys Thr Asp Gly Val Cys Glu Trp Lys Phe Phe  
 385 390 395 400  
 Ser Ser Met Pro Arg Gly Ser Ala Arg Ile Thr Val Ser Lys Asp Gln

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<210> 18
<211> 466
<212> PRT
<213> Rattus norvegicus
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Asp Lys Ser Asp Ser Glu Gln Val Thr Leu Arg Ile His Arg Lys Asn  
 225 230 235 240  
 Val Pro Ala Glu Gly Gly Gly Val Ser Ser Ala Lys Asn Lys Thr His  
 245 250 255  
 Phe Ser Val Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys  
 260 265 270  
 Thr Leu Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe  
 275 280 285  
 Phe Leu Val Met Pro Ile Gly Ser Phe Phe Pro Asp Phe Lys Pro Ser  
 290 295 300  
 Glu Thr Val Phe Lys Ile Val Phe Trp Leu Gly Tyr Leu Asn Ser Cys  
 305 310 315 320  
 Ile Asn Pro Ile Ile Tyr Pro Cys Ser Ser Gln Glu Phe Lys Lys Ala  
 325 330 335  
 Phe Gln Asn Val Leu Arg Ile Gln Cys Leu Arg Arg Arg Gln Ser Ser  
 340 345 350  
 Lys His Ala Leu Gly Tyr Thr Leu His Pro Pro Ser Gln Ala Leu Glu  
 355 360 365  
 Gly Gln His Arg Asp Met Val Arg Ile Pro Val Gly Ser Gly Glu Thr  
 370 375 380  
 Phe Tyr Lys Ile Ser Lys Thr Asp Gly Val Cys Glu Trp Lys Phe Phe  
 385 390 395 400  
 Ser Ser Met Pro Gln Gly Ser Ala Arg Ile Thr Val Pro Lys Asp Gln  
 405 410 415  
 Ser Ala Cys Thr Thr Ala Arg Val Arg Ser Lys Ser Phe Leu Gln Val  
 420 425 430  
 Cys Cys Cys Val Gly Ser Ser Ala Pro Arg Pro Glu Glu Asn His Gln  
 435 440 445  
 Val Pro Thr Ile Lys Ile His Thr Ile Ser Leu Gly Glu Asn Gly Glu  
 450 455 460  
 Glu Val  
 465

&lt;210&gt; 19

&lt;211&gt; 466

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 19

Met Val Leu Leu Ser Glu Asn Ala Ser Glu Gly Ser Asn Cys Thr His  
 1 5 10 15



Pro Pro Ala Gln Val Asn Ile Ser Lys Ala Ile Leu Leu Gly Val Ile  
                   20                  25                  30  
 Leu Gly Gly Leu Ile Ile Phe Gly Val Leu Gly Asn Ile Leu Val Ile  
                   35                  40                  45  
 Leu Ser Val Ala Cys His Arg His Leu His Ser Val Thr His Tyr Tyr  
                   50                  55                  60  
 Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Thr Ser Thr Val Leu  
                   65                  70                  75                  80  
 Pro Phe Ser Ala Ile Phe Glu Ile Leu Gly Tyr Trp Ala Phe Gly Arg  
                   85                  90                  95  
 Val Phe Cys Asn Ile Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala  
                   100                  105                  110  
 Ser Ile Met Gly Leu Cys Ile Ile Ser Ile Asp Arg Tyr Ile Gly Val  
                   115                  120                  125  
 Ser Tyr Pro Leu Arg Tyr Pro Thr Ile Val Thr Gln Arg Arg Gly Val  
                   130                  135                  140  
 Arg Ala Leu Leu Cys Val Trp Ala Leu Ser Leu Val Ile Ser Ile Gly  
                   145                  150                  155                  160  
 Pro Leu Phe Gly Trp Arg Gln Gln Ala Pro Glu Asp Glu Thr Ile Cys  
                   165                  170                  175  
 Gln Ile Asn Glu Glu Pro Gly Tyr Val Leu Phe Ser Ala Leu Gly Ser  
                   180                  185                  190  
 Phe Tyr Val Pro Leu Thr Ile Ile Leu Val Met Tyr Cys Arg Val Tyr  
                   195                  200                  205  
 Val Val Ala Lys Arg Glu Ser Arg Gly Leu Lys Ser Gly Leu Lys Thr  
                   210                  215                  220  
 Asp Lys Ser Asp Ser Glu Gln Val Thr Leu Arg Ile His Arg Lys Asn  
                   225                  230                  235                  240  
 Val Pro Ala Glu Gly Ser Gly Val Ser Ser Ala Lys Asn Lys Thr His  
                   245                  250                  255  
 Phe Ser Val Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys  
                   260                  265                  270  
 Thr Leu Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe  
                   275                  280                  285  
 Phe Leu Val Met Pro Ile Gly Ser Phe Phe Pro Asn Phe Lys Pro Pro  
                   290                  295                  300  
 Glu Thr Val Phe Lys Ile Val Phe Trp Leu Gly Tyr Leu Asn Ser Cys  
                   305                  310                  315                  320  
 Ile Asn Pro Ile Ile Tyr Pro Cys Ser Ser Gln Glu Phe Lys Lys Ala  
                   325                  330                  335

Phe Gln Asn Val Leu Arg Ile Gln Cys Leu Arg Arg Arg Gln Ser Ser  
340 345 350

Lys His Ala Leu Gly Tyr Thr Leu His Pro Pro Ser Gln Ala Val Glu  
355 360 365

Glu Gln His Arg Gly Met Val Arg Ile Pro Val Gly Ser Gly Glu Thr  
370 375 380

Phe Tyr Lys Ile Ser Lys Thr Asp Gly Val Cys Glu Trp Lys Phe Phe  
385 390 395 400

Ser Ser Met Pro Gln Gly Ser Ala Arg Ile Thr Met Pro Lys Asp Gln  
405 410 415

Ser Ala Cys Thr Thr Ala Arg Val Arg Ser Lys Ser Phe Leu Gln Val  
420 425 430

Cys Cys Cys Val Gly Ser Ser Thr Pro Arg Pro Glu Glu Asn His Gln  
435 440 445

Val Pro Thr Ile Lys Ile His Thr Ile Ser Leu Gly Glu Asn Gly Glu  
450 455 460

Glu Val  
465

<210> 20

<211> 466

<212> PRT

<213> Bos taurus

<400> 20

Met Val Phe Leu Ser Gly Asn Ala Ser Asp Ser Ser Asn Cys Thr His  
1 5 10 15

Pro Pro Pro Pro Val Asn Ile Ser Lys Ala Ile Leu Leu Gly Val Ile  
20 25 30

Leu Gly Gly Leu Ile Leu Phe Gly Val Leu Gly Asn Ile Leu Val Ile  
35 40 45

Leu Ser Val Ala Cys His Arg His Leu His Ser Val Thr His Tyr Tyr  
50 55 60

Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Thr Ser Thr Val Leu  
65 70 75 80

Pro Phe Ser Ala Ile Phe Glu Ile Leu Gly Tyr Trp Ala Phe Gly Arg  
85 90 95

Val Phe Cys Asn Val Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala  
100 105 110

Ser Ile Met Gly Leu Cys Ile Ile Ser Ile Asp Arg Tyr Ile Gly Val  
115 120 125

Ser Tyr Pro Leu Arg Tyr Pro Thr Ile Val Thr Gln Lys Arg Gly Leu  
 130 135 140  
 Met Ala Leu Leu Cys Val Trp Ala Leu Ser Leu Val Ile Ser Ile Gly  
 145 150 155 160  
 Pro Leu Phe Gly Trp Arg Gln Pro Ala Pro Glu Asp Glu Thr Ile Cys  
 165 170 175  
 Gln Ile Asn Glu Glu Pro Gly Tyr Val Leu Phe Ser Ala Leu Gly Ser  
 180 185 190  
 Phe Tyr Val Pro Leu Thr Ile Ile Leu Val Met Tyr Cys Arg Val Tyr  
 195 200 205  
 Val Val Ala Lys Arg Glu Ser Arg Gly Leu Lys Ser Gly Leu Lys Thr  
 210 215 220  
 Asp Lys Ser Asp Ser Glu Gln Val Thr Leu Arg Ile His Arg Lys Asn  
 225 230 235 240  
 Ala Gln Val Gly Gly Ser Gly Val Thr Ser Ala Lys Asn Lys Thr His  
 245 250 255  
 Phe Ser Val Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys  
 260 265 270  
 Thr Leu Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe  
 275 280 285  
 Phe Leu Val Met Pro Ile Gly Ser Phe Phe Pro Asp Phe Arg Pro Ser  
 290 295 300  
 Glu Thr Val Phe Lys Ile Ala Phe Trp Leu Gly Tyr Leu Asn Ser Cys  
 305 310 315 320  
 Ile Asn Pro Ile Ile Tyr Pro Cys Ser Ser Gln Glu Phe Lys Lys Ala  
 325 330 335  
 Phe Gln Asn Val Leu Arg Ile Gln Cys Leu Arg Arg Lys Gln Ser Ser  
 340 345 350  
 Lys His Thr Leu Gly Tyr Thr Leu His Ala Pro Ser His Val Leu Glu  
 355 360 365  
 Gly Gln His Lys Asp Leu Val Arg Ile Pro Val Gly Ser Ala Glu Thr  
 370 375 380  
 Phe Tyr Lys Ile Ser Lys Thr Asp Gly Val Cys Glu Trp Lys Ile Phe  
 385 390 395 400  
 Ser Ser Leu Pro Arg Gly Ser Ala Arg Met Ala Val Ala Arg Asp Pro  
 405 410 415  
 Ser Ala Cys Thr Thr Ala Arg Val Arg Ser Lys Ser Phe Leu Gln Val  
 420 425 430  
 Cys Cys Cys Leu Gly Pro Ser Thr Pro Ser His Gly Glu Asn His Gln  
 435 440 445

Ile Pro Thr Ile Lys Ile His Thr Ile Ser Leu Ser Glu Asn Gly Glu  
 450 455 460

Glu Val  
 465

<210> 21  
 <211> 295  
 <212> PRT  
 <213> Canis familiaris

<400> 21  
 Met Val Phe Leu Ser Gly Asn Ala Ser Asp Ser Ser Asn Cys Thr His  
 1 5 10 15  
 Pro Pro Ala Pro Val Asn Ile Ser Lys Ala Ile Leu Leu Gly Val Ile  
 20 25 30  
 Leu Gly Gly Leu Ile Ile Phe Gly Val Leu Gly Asn Ile Leu Val Ile  
 35 40 45  
 Leu Ser Val Ala Cys His Arg His Leu His Ser Val Thr His Tyr Tyr  
 50 55 60  
 Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Thr Ser Thr Val Leu  
 65 70 75 80  
 Pro Phe Ser Ala Ile Phe Glu Ile Leu Gly Tyr Trp Ala Phe Gly Arg  
 85 90 95  
 Val Phe Cys Asn Ile Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala  
 100 105 110  
 Ser Ile Met Gly Leu Cys Ile Ile Ser Ile Asp Arg Tyr Ile Gly Val  
 115 120 125  
 Ser Tyr Pro Leu Arg Tyr Pro Thr Ile Val Thr Gln Lys Arg Gly Leu  
 130 135 140  
 Met Ala Leu Leu Cys Val Trp Ala Leu Ser Leu Val Ile Ser Ile Gly  
 145 150 155 160  
 Pro Leu Phe Gly Trp Arg Gln Pro Ala Pro Glu Asp Glu Thr Ile Cys  
 165 170 175  
 Gln Ile Thr Glu Glu Pro Gly Tyr Val Leu Phe Ser Ala Leu Gly Ser  
 180 185 190  
 Phe Tyr Val Pro Leu Thr Ile Ile Leu Val Met Tyr Cys Arg Val Tyr  
 195 200 205  
 Val Val Ala Lys Arg Glu Ser Arg Gly Leu Lys Ser Gly Leu Lys Thr  
 210 215 220  
 Asp Lys Ser Asp Ser Glu Gln Val Thr Leu Arg Ile His Arg Lys Asn  
 225 230 235 240

Ala Pro Val Gly Gly Thr Gly Val Ser Ser Ala Lys Asn Lys Thr His  
245 250 255

Phe Ser Val Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys  
260 265 270

Thr Leu Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe  
275 280 285

Phe Leu Val Met Pro Ile Gly  
290 295

<210> 22

<211> 466

<212> PRT

<213> Oryctolagus cuniculus

<400> 22

Met Val Phe Leu Ser Gly Asn Ala Ser Asp Ser Ser Asn Cys Thr His  
1 5 10 15

Pro Pro Ala Pro Val Asn Ile Ser Lys Ala Ile Leu Leu Gly Val Ile  
20 25 30

Leu Gly Gly Leu Ile Leu Phe Gly Val Leu Gly Asn Ile Leu Val Ile  
35 40 45

Leu Ser Val Ala Cys His Arg His Leu His Ser Val Thr His Tyr Tyr  
50 55 60

Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Thr Ser Thr Val Leu  
65 70 75 80

Pro Phe Ser Ala Ile Phe Glu Ile Leu Gly Tyr Trp Ala Phe Gly Arg  
85 90 95

Val Phe Cys Asn Ile Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala  
100 105 110

Ser Ile Ile Ser Leu Cys Val Ile Ser Ile Asp Arg Tyr Ile Gly Val  
115 120 125

Ser Tyr Pro Leu Arg Tyr Pro Thr Ile Val Thr Gln Arg Arg Gly Leu  
130 135 140

Arg Ala Leu Leu Cys Val Trp Ala Phe Ser Leu Val Ile Ser Val Gly  
145 150 155 160

Pro Leu Phe Gly Trp Arg Gln Pro Ala Pro Asp Asp Glu Thr Ile Cys  
165 170 175

Gln Ile Asn Glu Glu Pro Gly Tyr Val Leu Phe Ser Ala Leu Gly Ser  
180 185 190

Phe Tyr Val Pro Leu Thr Ile Ile Leu Ala Met Tyr Cys Arg Val Tyr  
195 200 205

Val Val Ala Lys Arg Glu Ser Arg Gly Leu Lys Ser Gly Leu Lys Thr

210	215	220
Asp Lys Ser Asp Ser	Glu Gln Val Thr Leu	Arg Ile His Arg Lys Asn
225	230	235 240
Ala Pro Ala Gly Gly Ser Gly Val Ala Ser Ala Lys Asn Lys Thr His		
	245	250 255
Phe Ser Val Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys		
	260	265 270
Thr Leu Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe		
	275	280 285
Phe Leu Val Met Pro Ile Gly Ser Phe Phe Pro Asp Phe Lys Pro Pro		
	290	295 300
Glu Thr Val Phe Lys Ile Val Phe Trp Leu Gly Tyr Leu Asn Ser Cys		
	305	310 315 320
Ile Asn Pro Ile Ile Tyr Pro Cys Ser Ser Gln Glu Phe Lys Lys Ala		
	325	330 335
Phe Gln Asn Val Leu Lys Ile Gln Cys Leu Arg Arg Lys Gln Ser Ser		
	340	345 350
Lys His Ala Leu Gly Tyr Thr Leu His Ala Pro Ser Gln Ala Leu Glu		
	355	360 365
Gly Gln His Lys Asp Met Val Arg Ile Pro Val Gly Ser Gly Glu Thr		
	370	375 380
Phe Tyr Lys Ile Ser Lys Thr Asp Gly Val Cys Glu Trp Lys Phe Phe		
	385	390 395 400
Ser Ser Met Pro Arg Gly Ser Ala Arg Ile Thr Val Pro Lys Asp Gln		
	405	410 415
Ser Ala Cys Thr Thr Ala Arg Val Arg Ser Lys Ser Phe Leu Gln Val		
	420	425 430
Cys Cys Cys Val Gly Pro Ser Thr Pro Asn Pro Gly Glu Asn His Gln		
	435	440 445
Val Pro Thr Ile Lys Ile His Thr Ile Ser Leu Ser Glu Asn Gly Glu		
	450	455 460
Glu Val		
465		

&lt;210&gt; 23

&lt;211&gt; 466

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 23

Met	Val	Phe	Leu	Ser	Gly	Asn	Ala	Ser	Asp	Ser	Ser	Asn	Cys	Thr	Gln
1				5					10					15	

Pro Pro Ala Pro Val Asn Ile Ser Lys Ala Ile Leu Leu Gly Val Ile  
                   20                                  25                                  30  
 Leu Gly Gly Leu Ile Leu Phe Gly Val Leu Gly Asn Ile Leu Val Ile  
                   35                                  40                                  45  
 Leu Ser Val Ala Cys His Arg His Leu His Ser Val Thr His Tyr Tyr  
                   50                                  55                                  60  
 Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Thr Ser Thr Val Leu  
                   65                                  70                                  75                                  80  
 Pro Phe Ser Ala Ile Phe Glu Val Leu Gly Tyr Trp Ala Phe Gly Arg  
                                   85                                  90                                  95  
 Val Phe Cys Asn Ile Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala  
                                   100                                  105                                  110  
 Ser Ile Met Gly Leu Cys Ile Ile Ser Ile Asp Arg Tyr Ile Gly Val  
                   115                                  120                                  125  
 Ser Tyr Pro Leu Arg Tyr Pro Thr Ile Val Thr Gln Arg Arg Gly Leu  
                   130                                  135                                  140  
 Met Ala Leu Leu Cys Val Trp Ala Leu Ser Leu Val Ile Ser Ile Gly  
                   145                                  150                                  155                                  160  
 Pro Leu Phe Gly Trp Arg Gln Pro Ala Pro Glu Asp Glu Thr Ile Cys  
                                   165                                  170                                  175  
 Gln Ile Asn Glu Glu Pro Gly Tyr Val Leu Phe Ser Ala Leu Gly Ser  
                                   180                                  185                                  190  
 Phe Tyr Leu Pro Leu Ala Ile Ile Leu Val Met Tyr Cys Arg Val Tyr  
                   195                                  200                                  205  
 Val Val Ala Lys Arg Glu Ser Arg Gly Leu Lys Ser Gly Leu Lys Thr  
                   210                                  215                                  220  
 Asp Lys Ser Asp Ser Glu Gln Val Thr Leu Arg Ile His Arg Lys Asn  
                   225                                  230                                  235                                  240  
 Ala Pro Ala Gly Gly Ser Gly Met Ala Ser Ala Lys Thr Lys Thr His  
                                   245                                  250                                  255  
 Phe Ser Val Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys  
                   260                                  265                                  270  
 Thr Leu Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe  
                   275                                  280                                  285  
 Phe Leu Val Met Pro Ile Gly Ser Phe Phe Pro Asp Phe Lys Pro Ser  
                   290                                  295                                  300  
 Glu Thr Val Phe Lys Ile Val Phe Trp Leu Gly Tyr Leu Asn Ser Cys  
                   305                                  310                                  315                                  320  
 Ile Asn Pro Ile Ile Tyr Pro Cys Ser Ser Gln Glu Phe Lys Lys Ala

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          325          330          335
Phe Gln Asn Val Leu Arg Ile Gln Cys Leu Cys Arg Lys Gln Ser Ser
          340          345          350
Lys His Ala Leu Gly Tyr Thr Leu His Pro Pro Ser Gln Ala Val Glu
          355          360          365
Gly Gln His Lys Asp Met Val Arg Ile Pro Val Gly Ser Arg Glu Thr
          370          375          380
Phe Tyr Arg Ile Ser Lys Thr Asp Gly Val Cys Glu Trp Lys Phe Phe
          385          390          395          400
Ser Ser Met Pro Arg Gly Ser Ala Arg Ile Thr Val Ser Lys Asp Gln
          405          410          415
Ser Ser Cys Thr Thr Ala Arg Val Arg Ser Lys Ser Phe Leu Gln Val
          420          425          430
Cys Cys Cys Val Gly Pro Ser Thr Pro Ser Leu Asp Lys Asn His Gln
          435          440          445
Val Pro Thr Ile Lys Val His Thr Ile Ser Leu Ser Glu Asn Gly Glu
          450          455          460
Glu Val
          465

<210> 24
<211> 470
<212> PRT
<213> Oryzias latipes

<400> 24
Met Thr Pro Ser Ser Val Thr Leu Asn Cys Ser Asn Cys Ser His Val
  1          5          10          15
Leu Ala Pro Glu Leu Asn Thr Val Lys Ala Val Val Leu Gly Met Val
          20          25          30
Leu Gly Ile Phe Ile Leu Phe Gly Val Ile Gly Asn Ile Leu Val Ile
          35          40          45
Leu Ser Val Val Cys His Arg His Leu Gln Thr Val Thr Tyr Tyr Phe
          50          55          60
Ile Val Asn Leu Ala Val Ala Asp Leu Leu Leu Ser Ser Thr Val Leu
          65          70          75          80
Pro Phe Ser Ala Ile Phe Glu Ile Leu Asp Arg Trp Val Phe Gly Arg
          85          90          95
Val Phe Cys Asn Ile Trp Ala Ala Val Asp Val Leu Cys Cys Thr Ala
          100          105          110
Ser Ile Met Ser Leu Cys Val Ile Ser Val Asp Arg Tyr Ile Gly Val
          115          120          125

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Ser Tyr Pro Leu Arg Tyr Pro Ala Ile Met Thr Lys Arg Arg Ala Leu  
 130 135 140  
 Leu Ala Val Met Leu Leu Trp Val Leu Ser Val Ile Ile Ser Ile Gly  
 145 150 155 160  
 Pro Leu Phe Gly Trp Lys Glu Pro Ala Pro Glu Asp Glu Thr Val Cys  
 165 170 175  
 Lys Ile Thr Glu Glu Pro Gly Tyr Ala Ile Phe Ser Ala Val Gly Ser  
 180 185 190  
 Phe Tyr Leu Pro Leu Ala Ile Ile Leu Ala Met Tyr Cys Arg Val Tyr  
 195 200 205  
 Val Val Ala Gln Lys Glu Ser Arg Gly Leu Lys Glu Gly Gln Lys Ile  
 210 215 220  
 Glu Lys Ser Asp Ser Glu Gln Val Ile Leu Arg Met His Arg Gly Asn  
 225 230 235 240  
 Thr Thr Val Ser Glu Asp Glu Ala Leu Arg Ser Arg Thr His Phe Ala  
 245 250 255  
 Leu Arg Leu Leu Lys Phe Ser Arg Glu Lys Lys Ala Ala Lys Thr Leu  
 260 265 270  
 Gly Ile Val Val Gly Cys Phe Val Leu Cys Trp Leu Pro Phe Phe Leu  
 275 280 285  
 Val Leu Pro Ile Gly Ser Ile Phe Pro Ala Tyr Arg Pro Ser Asp Thr  
 290 295 300  
 Val Phe Lys Ile Thr Phe Trp Leu Gly Tyr Phe Asn Ser Cys Ile Asn  
 305 310 315 320  
 Pro Ile Ile Tyr Leu Cys Ser Asn Gln Glu Phe Lys Lys Ala Phe Gln  
 325 330 335  
 Ser Leu Leu Gly Val His Cys Leu Arg Met Thr Pro Arg Ala His His  
 340 345 350  
 His His Leu Ser Val Gly Gln Ser Gln Thr Gln Gly His Ser Leu Thr  
 355 360 365  
 Ile Ser Leu Asp Ser Lys Gly Ala Pro Cys Arg Leu Ser Pro Ser Ser  
 370 375 380  
 Ser Val Ala Leu Ser Arg Thr Pro Ser Ser Arg Asp Ser Arg Glu Trp  
 385 390 395 400  
 Arg Val Phe Ser Gly Gly Pro Ile Asn Ser Gly Pro Gly Pro Thr Glu  
 405 410 415  
 Ala Gly Arg Ala Lys Val Ala Lys Leu Cys Asn Lys Ser Leu His Arg  
 420 425 430  
 Thr Cys Cys Cys Ile Leu Arg Ala Arg Thr Pro Thr Gln Asp Pro Ala

435                      440                      445  
 Pro Leu Gly Asp Leu Pro Thr Ile Lys Ile His Gln Leu Ser Leu Ser  
     450                      455                      460  
  
 Glu Lys Gly Glu Ser Val  
 465                      470  
  
 <210> 25  
 <211> 391  
 <212> PRT  
 <213> Branchiostoma lanceolatum  
  
 <400> 25  
 Met Ser Ala Asn Thr Thr Val Ser Pro Thr Glu Thr Thr Ala Asn Leu  
     1                      5                      10                      15  
  
 Thr Ala Asn Ser Thr Glu Ala Ser Val Gly Ser Cys Phe Ala Pro Asn  
                     20                      25                      30  
  
 Pro Tyr Ser Ala Gly Val Gln Ala Val Leu Gly Leu Ile Thr Val Ile  
                     35                      40                      45  
  
 Leu Ile Leu Leu Thr Val Ile Gly Asn Val Leu Val Ile Leu Ala Val  
     50                      55                      60  
  
 Thr Cys His Arg Lys Met Arg Thr Val Thr Asn Phe Phe Ile Val Ser  
     65                      70                      75                      80  
  
 Leu Ala Cys Ala Asp Leu Ser Val Gly Ile Thr Val Leu Pro Phe Ala  
                     85                      90                      95  
  
 Ala Thr Asn Asp Ile Leu Gly Tyr Trp Pro Phe Gly Gly Tyr Cys Asp  
                     100                      105                      110  
  
 Val Trp Val Ser Phe Asp Val Leu Asn Ser Thr Ala Ser Ile Leu Asn  
                     115                      120                      125  
  
 Leu Val Val Ile Ala Phe Asp Arg Phe Leu Ala Ile Thr Ala Pro Phe  
     130                      135                      140  
  
 Thr Tyr His Thr Arg Met Thr Glu Arg Thr Ala Gly Ile Leu Ile Ala  
 145                      150                      155                      160  
  
 Thr Val Trp Gly Ile Ser Leu Val Val Ser Phe Leu Pro Ile Gln Ala  
                     165                      170                      175  
  
 Gly Trp Tyr Arg Asp Asn Gln Ser Glu Glu Ala Leu Ala Ile Tyr Ser  
                     180                      185                      190  
  
 Asp Pro Cys Leu Cys Ile Phe Thr Ala Ser Thr Ala Tyr Thr Ile Val  
                     195                      200                      205  
  
 Ser Ser Leu Ile Ser Phe Tyr Ile Pro Leu Leu Ile Met Leu Val Phe  
     210                      215                      220  
  
 Tyr Gly Ile Ile Phe Lys Ala Ala Arg Asp Gln Ala Arg Lys Ile Asn  
 225                      230                      235                      240

Ala Leu Glu Gly Arg Leu Glu Gln Glu Asn Asn Arg Gly Lys Lys Ile  
245 250 255

Ser Leu Ala Lys Glu Lys Lys Ala Ala Lys Thr Leu Gly Ile Ile Met  
260 265 270

Gly Val Phe Ile Leu Cys Trp Leu Pro Phe Phe Val Val Asn Ile Val  
275 280 285

Asn Pro Phe Cys Asp Arg Cys Val Gln Pro Ala Val Phe Ile Ala Leu  
290 295 300

Thr Trp Leu Gly Trp Ile Asn Ser Cys Phe Asn Pro Ile Ile Tyr Ala  
305 310 315 320

Phe Asn Lys Glu Phe Arg Lys Val Phe Val Lys Met Ile Cys Cys His  
325 330 335

Lys Cys Arg Gly Val Thr Val Gly Pro Asn His Ala Asp Leu Asn Tyr  
340 345 350

Asp Pro Val Ala Met Arg Leu Lys Lys Arg Gly Glu Asn Ala Asn Gly  
355 360 365

Thr Val Asn Gly Asp Ala Asn Gly Lys Ala Asn Gly Asn Ile Glu Ala  
370 375 380

Gly Glu Gly Thr Ser Ser Ser  
385 390

<210> 26

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthesized peptide

<400> 26

Met Thr Ser Thr Cys Thr Asn Ser Thr Arg Glu Ser Asn Ser Ser His  
1 5 10 15

Thr Cys Met Pro Leu Ser Lys Met Pro Ile Ser Leu Ala His Gly Ile  
20 25 30

Ile Arg Ser Thr  
35

<210> 27

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthesized

## peptide

&lt;400&gt; 27

Gln Arg Lys Pro Gln Leu Leu Gln Val Thr Asn Arg Phe  
 1 5 10

&lt;210&gt; 28

&lt;211&gt; 5

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt; .

<223> Description of Artificial Sequence: Synthesized  
 peptide

&lt;400&gt; 28

Trp Pro Leu Asn Ser  
 1 5

&lt;210&gt; 29

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthesized  
 peptide

&lt;400&gt; 29

Asp Arg Tyr Leu Ser Ile Ile His Pro Leu Ser Tyr Pro Ser Lys Met  
 1 5 10 15

Thr Gln Arg Arg  
 20

&lt;210&gt; 30

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthesized  
 peptide

&lt;400&gt; 30

Gly Gln Ala Ala Phe Asp Glu Arg Asn Ala Leu Cys Ser Met Ile Trp  
 1 5 10 15

Gly Ala Ser Pro Ser Tyr Thr  
 20

&lt;210&gt; 31

&lt;211&gt; 182

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthesized peptide

&lt;400&gt; 31

Cys Ala Ala Arg Arg Gln His Ala Leu Leu Tyr Asn Val Lys Arg His  
 1 5 10 15

Ser Leu Glu Val Arg Val Lys Asp Cys Val Glu Asn Glu Asp Glu Glu  
 20 25 30

Gly Ala Glu Lys Lys Glu Glu Phe Gln Asp Glu Ser Glu Phe Arg Arg  
 35 40 45

Gln His Glu Gly Glu Val Lys Ala Lys Glu Gly Arg Met Glu Ala Lys  
 50 55 60

Asp Gly Ser Leu Lys Ala Lys Glu Gly Ser Thr Gly Thr Ser Glu Ser  
 65 70 75 80

Ser Val Glu Ala Gly Ser Glu Glu Val Arg Glu Ser Ser Thr Val Ala  
 85 90 95

Ser Asp Gly Ser Met Glu Gly Lys Glu Gly Ser Thr Lys Val Glu Glu  
 100 105 110

Asn Ser Met Lys Ala Asp Lys Gly Arg Thr Glu Val Asn Gln Cys Ser  
 115 120 125

Ile Asp Leu Gly Glu Asp Asp Met Glu Phe Gly Glu Asp Asp Ile Asn  
 130 135 140

Phe Ser Glu Asp Asp Val Glu Ala Val Asn Ile Pro Glu Ser Leu Pro  
 145 150 155 160

Pro Ser Arg Arg Asn Ser Asn Ser Asn Pro Pro Leu Pro Arg Cys Tyr  
 165 170 175

Gln Cys Lys Ala Ala Lys  
 180

&lt;210&gt; 32

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthesized peptide

&lt;400&gt; 32

Ala Val Leu Ala Val Trp Val Asp Val Glu Thr Gln Val Pro Gln  
 1 5 10 15

&lt;210&gt; 33

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthesized peptide

&lt;400&gt; 33

Tyr Gly Tyr Met His Lys Thr Ile Lys Lys Glu Ile Gln Asp Met Leu  
 1 5 10 15

Lys Lys Phe Phe Cys Lys Glu Lys Pro Pro Lys Glu Asp Ser His Pro  
 20 25 30

Asp Leu Pro Gly Thr Glu Gly Gly Thr Glu Gly Lys Ile Val Pro Ser  
 35 40 45

Tyr Asp Ser Ala Thr Phe Pro  
 50 55

&lt;210&gt; 34

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: HGPRBMY8 sense primer

&lt;400&gt; 34

gcagagcact cctccactct 20

&lt;210&gt; 35

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: HGPRBMY8 anti-sense primer

&lt;400&gt; 35

agcaggcaat catgacaatc 20

&lt;210&gt; 36

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: GPCR84 sense primer

&lt;400&gt; 36

gttagcctca cccacctgtt 20

<210> 37  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: GPCR84  
 anti-sense primer

<400> 37  
 cacaatccag gtgccataga 20

<210> 38  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: HGPRBMY8 5'  
 primer

<400> 38  
 gtccccaagc ttgcacatg acgtccacct gcaccaacag ca 42

<210> 39  
 <211> 62  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: HGPRBMY8 3'  
 Flag-tag primer

<400> 39  
 cgggatccta cttgtcgtcg tcgtccttgt agtccatagg aaaagtagca gaatcgtagg 60  
 aa 62

<210> 40  
 <211> 407  
 <212> PRT  
 <213> Homo sapiens

<400> 40  
 Met Ser Leu Asn Ser Ser Leu Ser Cys Arg Lys Glu Leu Ser Asn Leu  
   1                  5                  10                  15  
 Thr Glu Glu Glu Gly Gly Glu Gly Gly Val Ile Ile Thr Gln Phe Ile  
           20                  25                  30  
 Ala Ile Ile Val Ile Thr Ile Phe Val Cys Leu Gly Asn Leu Val Ile  
       35                  40                  45  
 Val Val Thr Leu Tyr Lys Lys Ser Tyr Leu Leu Thr Leu Ser Asn Lys  
   50                  55                  60

Phe Val Phe Ser Leu Thr Leu Ser Asn Phe Leu Leu Ser Val Leu Val  
 65 70 75 80  
 Leu Pro Phe Val Val Thr Ser Ser Ile Arg Arg Glu Trp Ile Phe Gly  
 85 90 95  
 Val Val Trp Cys Asn Phe Ser Ala Leu Leu Tyr Leu Leu Ile Ser Ser  
 100 105 110  
 Ala Ser Met Leu Thr Leu Gly Val Ile Ala Ile Asp Arg Tyr Tyr Ala  
 115 120 125  
 Val Leu Tyr Pro Met Val Tyr Pro Met Lys Ile Thr Gly Asn Arg Ala  
 130 135 140  
 Val Met Ala Leu Val Tyr Ile Trp Leu His Ser Leu Ile Gly Cys Leu  
 145 150 155 160  
 Pro Pro Leu Phe Gly Trp Ser Ser Val Glu Phe Asp Glu Phe Lys Trp  
 165 170 175  
 Met Cys Val Ala Ala Trp His Arg Glu Pro Gly Tyr Thr Ala Phe Trp  
 180 185 190  
 Gln Ile Trp Cys Ala Leu Phe Pro Phe Leu Val Met Leu Val Cys Tyr  
 195 200 205  
 Gly Phe Ile Phe Arg Val Ala Arg Val Lys Ala Arg Lys Val His Cys  
 210 215 220  
 Gly Thr Val Val Ile Val Glu Glu Asp Ala Gln Arg Thr Gly Arg Lys  
 225 230 235 240  
 Asn Ser Ser Thr Ser Thr Ser Ser Ser Gly Ser Arg Arg Asn Ala Phe  
 245 250 255  
 Gln Gly Val Val Tyr Ser Ala Asn Gln Cys Lys Ala Leu Ile Thr Ile  
 260 265 270  
 Leu Val Val Leu Gly Ala Phe Met Val Thr Trp Gly Pro Tyr Met Val  
 275 280 285  
 Val Ile Ala Ser Glu Ala Leu Trp Gly Lys Ser Ser Val Ser Pro Ser  
 290 295 300  
 Leu Glu Thr Trp Ala Thr Trp Leu Ser Phe Ala Ser Ala Val Cys His  
 305 310 315 320  
 Pro Leu Ile Tyr Gly Leu Trp Asn Lys Thr Val Arg Lys Glu Leu Leu  
 325 330 335  
 Gly Met Cys Phe Gly Asp Arg Tyr Tyr Arg Glu Pro Phe Val Gln Arg  
 340 345 350  
 Gln Arg Thr Ser Arg Leu Phe Ser Ile Ser Asn Arg Ile Thr Asp Leu  
 355 360 365  
 Gly Leu Ser Pro His Leu Thr Ala Leu Met Ala Gly Gly Gln Pro Leu  
 370 375 380



Gly His Ser Ser Ser Thr Gly Asp Thr Gly Phe Ser Cys Ser Gln Asp  
 385 390 395 400

Ser Gly Asn Leu Arg Ala Leu  
 405

<210> 41

<211> 448

<212> PRT

<213> Homo sapiens

<400> 41

Met Thr Ser Thr Cys Thr Asn Ser Thr Arg Glu Ser Asn Ser Ser His  
 1 5 10 15

Thr Cys Met Pro Leu Ser Lys Met Pro Ile Ser Leu Ala His Gly Ile  
 20 25 30

Ile Arg Ser Thr Val Leu Val Ile Phe Leu Ala Ala Ser Phe Val Gly  
 35 40 45

Asn Ile Val Leu Ala Leu Val Leu Gln Arg Lys Pro Gln Leu Leu Gln  
 50 55 60

Val Thr Asn Arg Phe Ile Phe Asn Leu Leu Val Thr Asp Leu Leu Gln  
 65 70 75 80

Ile Ser Leu Val Ala Pro Trp Val Val Ala Thr Ser Val Pro Leu Phe  
 85 90 95

Trp Pro Leu Asn Ser His Phe Cys Thr Ala Leu Val Ser Leu Thr His  
 100 105 110

Leu Phe Ala Phe Ala Ser Val Asn Thr Ile Val Val Val Ser Val Asp  
 115 120 125

Arg Tyr Leu Ser Ile Ile His Pro Leu Ser Tyr Pro Ser Lys Met Thr  
 130 135 140

Gln Arg Arg Gly Tyr Leu Leu Leu Tyr Gly Thr Trp Ile Val Ala Ile  
 145 150 155 160

Leu Gln Ser Thr Pro Pro Leu Tyr Gly Trp Gly Gln Ala Ala Phe Asp  
 165 170 175

Glu Arg Asn Ala Leu Cys Ser Met Ile Trp Gly Ala Ser Pro Ser Tyr  
 180 185 190

Thr Ile Leu Ser Val Val Ser Phe Ile Val Ile Pro Leu Ile Val Met  
 195 200 205

Ile Ala Cys Tyr Ser Val Val Phe Cys Ala Ala Arg Arg Gln His Ala  
 210 215 220

Leu Leu Tyr Asn Val Lys Arg His Ser Leu Glu Val Arg Val Lys Asp  
 225 230 235 240

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Thr Cys Met Pro Leu Ser Lys Met Pro Ile Ser Leu Ala His Gly Ile
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Ile Arg Ser Thr Val Leu Val Ile Phe Leu Ala Ala Ser Phe Val Gly
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Asn Ile Val Leu Ala Leu Val Leu Gln Arg Lys Pro Gln Leu Leu Gln

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Ile	Ser	Leu	Val	Ala	Pro	Trp	Val	Val	Ala	Thr	Ser	Val	Pro	Leu	Phe
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Trp	Pro	Leu	Asn	Ser	His	Phe	Cys	Thr	Ala	Leu	Val	Ser	Leu	Thr	His
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Leu	Gln	Ser	Thr	Pro	Pro	Leu	Tyr	Gly	Trp	Gly	Gln	Ala	Ala	Phe	Asp
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Glu	Arg	Asn	Ala	Leu	Cys	Ser	Met	Ile	Trp	Gly	Ala	Ser	Pro	Ser	Tyr
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Thr	Ile	Leu	Ser	Val	Val	Ser	Phe	Ile	Val	Ile	Pro	Leu	Ile	Val	Met
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Leu	Leu	Tyr	Asn	Val	Lys	Arg	His	Ser	Leu	Glu	Val	Arg	Val	Lys	Asp
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Cys	Val	Glu	Asn	Glu	Asp	Glu	Glu	Gly	Ala	Glu	Lys	Lys	Glu	Glu	Phe
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Gln	Asp	Glu	Ser	Glu	Phe	Arg	Arg	Gln	His	Glu	Gly	Glu	Val	Lys	Ala
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Lys	Glu	Gly	Arg	Met	Glu	Ala	Lys	Asp	Gly	Ser	Leu	Lys	Ala	Lys	Glu
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Gly	Ser	Thr	Gly	Thr	Ser	Glu	Ser	Ser	Val	Glu	Ala	Arg	Gly	Ser	Glu
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Glu	Val	Arg	Glu	Ser	Ser	Thr	Val	Ala	Ser	Asp	Gly	Ser	Met	Glu	Gly
305					310					315				320	
Lys	Glu	Gly	Ser	Thr	Lys	Val	Glu	Glu	Asn	Ser	Met	Lys	Ala	Asp	Lys
			325					330					335		
Gly	Arg	Thr	Glu	Val	Asn	Gln	Cys	Ser	Ile	Asp	Leu	Gly	Glu	Asp	Asp
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Met	Glu	Phe	Gly	Glu	Asp	Asp	Ile	Asn	Phe	Ser	Glu	Asp	Asp	Val	Glu
	355					360					365				

Ala Val Asn Ile Pro Glu Ser Leu Pro Pro Ser Arg Arg Asn Ser Asn  
 370 375 380

Ser Asn Pro Pro Leu Pro Arg Cys Tyr Gln Cys Lys Ala Lys Lys Val  
 385 390 395 400

Ile Phe Ile Ile Ile Phe Ser Tyr Val Leu Ser Leu Gly Pro Tyr Cys  
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Phe Leu Ala Val Glu Asp Ser His Pro Asp Leu Pro Gly Thr Glu Gly  
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Gly Thr Glu Gly Lys Ile Val Pro Ser Tyr Asp Ser Ala Thr Phe Pro  
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<210> 43

<211> 448

<212> PRT

<213> Homo sapiens

<400> 43

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 35 40 45

Asn Ile Val Leu Ala Leu Val Leu Gln Arg Lys Pro Gln Leu Leu Gln  
 50 55 60

Val Thr Asn Arg Phe Ile Phe Asn Leu Leu Val Thr Asp Leu Leu Gln  
 65 70 75 80

Ile Ser Leu Val Ala Pro Trp Val Val Ala Thr Ser Val Pro Leu Phe  
 85 90 95

Trp Pro Leu Asn Ser His Phe Cys Thr Ala Leu Val Ser Leu Thr His  
 100 105 110

Leu Phe Ala Phe Ala Ser Val Asn Thr Ile Val Leu Val Ser Val Asp  
 115 120 125

Arg Tyr Leu Ser Ile Ile His Pro Leu Ser Tyr Pro Ser Lys Met Thr  
 130 135 140

Gln Arg Arg Gly Tyr Leu Leu Leu Tyr Gly Thr Trp Ile Val Ala Ile  
 145 150 155 160

Leu Gln Ser Thr Pro Pro Leu Tyr Gly Trp Gly Gln Ala Ala Phe Asp  
 165 170 175

Glu Arg Asn Ala Leu Cys Ser Met Ile Trp Gly Ala Ser Pro Ser Tyr

180							185					190				
Thr	Ile	Leu	Ser	Val	Val	Ser	Phe	Ile	Val	Ile	Pro	Leu	Ile	Val	Met	
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Leu	Leu	Tyr	Asn	Val	Lys	Arg	His	Ser	Leu	Glu	Val	Arg	Val	Lys	Asp	
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Cys	Val	Glu	Asn	Glu	Asp	Glu	Glu	Gly	Ala	Glu	Lys	Lys	Glu	Glu	Phe	
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Gln	Asp	Glu	Ser	Glu	Phe	Arg	Arg	Gln	His	Glu	Gly	Glu	Val	Lys	Ala	
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Ala	Val	Asn	Ile	Pro	Glu	Ser	Leu	Pro	Pro	Ser	Arg	Arg	Asn	Ser	Asn	
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Phe	Leu	Ala	Val	Glu	Asp	Ser	His	Pro	Asp	Leu	Pro	Gly	Thr	Glu	Gly	
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&lt;210&gt; 44

&lt;211&gt; 1659

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 44

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&lt;210&gt; 45

&lt;211&gt; 1527

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 45

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 1440  
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 1527

&lt;210&gt; 46

&lt;211&gt; 1527

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 46

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 aatttcagtg aggatgacgt cgaggcagtg aacatcccgg agagcctccc acccagtcgt  
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1440  
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1527

<210> 47

<211> 1580

<212> DNA

<213> Homo sapiens

<400> 47

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cggcatcatc cgctcaaccg tgctgggtat cttcctcgcc gctcttttcg tcggcaacat 180  
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1580



<210> 48  
 <211> 1527  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> N=A+T+G+C

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 atttcgctcg tggccccctg ggtgggtggc acctctgtgc ctctcttctg gcccctcaac 300  
 agccacttct gcacggccct ggtagcctc acccacctgt tcgccttcgc cagcgtcaac 360  
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 1527

<210> 49  
 <211> 508  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> Xaa=Unknown, modified, or any amino acid

<400> 49  
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 Ile Arg Ser Thr Val Leu Val Ile Phe Leu Ala Ala Ser Phe Val Gly  
                   35                  40                  45  
 Asn Ile Val Leu Ala Leu Val Leu Gln Arg Lys Pro Gln Leu Leu Gln  
                   50                  55                  60  
 Val Thr Asn Arg Phe Ile Phe Asn Leu Leu Val Thr Asp Leu Leu Gln  
                   65                  70                  75                  80  
 Ile Ser Leu Val Ala Pro Trp Val Val Ala Thr Ser Val Pro Leu Phe  
                   85                  90                  95  
 Trp Pro Leu Asn Ser His Phe Cys Thr Ala Leu Val Ser Leu Thr His  
                   100                  105                  110  
 Leu Phe Ala Phe Ala Ser Val Asn Thr Ile Val Xaa Val Ser Val Asp  
                   115                  120                  125  
 Arg Tyr Leu Ser Ile Ile His Pro Leu Ser Tyr Pro Ser Lys Met Thr  
                   130                  135                  140  
 Gln Arg Arg Gly Tyr Leu Leu Leu Tyr Gly Thr Trp Ile Val Ala Ile  
                   145                  150                  155                  160  
 Leu Gln Ser Thr Pro Pro Leu Tyr Gly Trp Gly Gln Ala Ala Phe Asp  
                   165                  170                  175  
 Glu Arg Asn Ala Leu Cys Ser Met Ile Trp Gly Ala Ser Pro Ser Tyr  
                   180                  185                  190  
 Thr Ile Leu Ser Val Val Ser Phe Ile Val Ile Pro Leu Ile Val Met  
                   195                  200                  205  
 Ile Ala Cys Tyr Ser Val Val Phe Cys Ala Ala Arg Arg Gln His Ala  
                   210                  215                  220  
 Leu Leu Tyr Asn Val Lys Arg His Ser Leu Glu Val Arg Val Lys Asp  
                   225                  230                  235                  240  
 Cys Val Glu Asn Glu Asp Glu Glu Gly Ala Glu Lys Lys Glu Glu Phe  
                   245                  250                  255  
 Gln Asp Glu Ser Glu Phe Arg Arg Gln His Glu Gly Glu Val Lys Ala  
                   260                  265                  270  
 Lys Glu Gly Arg Met Glu Ala Lys Asp Gly Ser Leu Lys Ala Lys Glu  
                   275                  280                  285  
 Gly Ser Thr Gly Thr Ser Glu Ser Ser Val Glu Ala Arg Gly Ser Glu  
                   290                  295                  300  
 Glu Val Arg Glu Ser Ser Thr Val Ala Ser Asp Gly Ser Met Glu Gly  
                   305                  310                  315                  320  
 Lys Glu Gly Ser Thr Lys Val Glu Glu Asn Ser Met Lys Ala Asp Lys

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<210> 50
<211> 21
<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: SNP

caccattgtc ttggtgtcag t

21

<211> 21

<213> Artificial Sequence

<223> Description of Artificial Sequence: SNP

caccattgtc gtggtgtcag t

21

<210> 52  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: SNP

<400> 52  
ggtgaagatg acatggagtt t 21

<210> 53  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: SNP

<400> 53  
ggtgaagatg gcatggagtt t 21

<210> 54  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: SNP

<400> 54  
gtgcaaagct gctaaagtga t 21

<210> 55  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: SNP

<400> 55  
gtgcaaagct actaaagtga t 21

<210> 56  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: SNP

<400> 56  
tgcaaagctg cttaaagtgat c 21

<210> 57  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: SNP

<400> 57  
 tgcaaagctg ataaagtgat c 21

<210> 58  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: SNP

<400> 58  
 gcaaagctgc taaagtgatc t 21

<210> 59  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: SNP

<400> 59  
 gcaaagctgc gaaagtgatc t 21

<210> 60  
 <211> 17  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: GAPDH F3  
 Forward primer

<400> 60  
 agccgagcca catcgct 17

<210> 61  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: GAPDH R1  
 Reverse primer

<400> 61  
gtgaccaggc gcccaatac 19

<210> 62  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: GAPDH-PVIC  
Taqman(R) Probe

<400> 62  
caaatccgtt gactccgacc ttcacctt 28

<210> 63  
<211> 99  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Oligo 1;  
N=A+G+C+T and B=C+G+T

<400> 63  
cgaagcgtaa gggcccagcc ggccnnbnnb nnbnbnbnbn nbnnbnnbnn bnnbnnbnnb 60  
nnbnbnbnbn nbnnbnnbnn bnnbccgggt ccgggcggc 99

<210> 64  
<211> 95  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Oligo 2;  
N=A+G+C+T and V=C+A+G

<400> 64  
aaaaggaaaa aagcggccgc vnnvnnvnnv nnvnnvnnvn nvnnvnnvnn vnnvnnvnnv 60  
nnvnnvnnvn nvnnvnnvnn gccgcccggg cccgg 95

<210> 65  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 65  
Pro Gly Pro Gly Gly  
1 5

<210> 66  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 66  
 Gly Asp Phe Trp Tyr Glu Ala Cys Glu Ser Ser Cys Ala Phe Trp  
           1                  5                  10                  15

<210> 67  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 67  
 Leu Glu Trp Gly Ser Asp Val Phe Tyr Asp Val Tyr Asp Cys Cys  
           1                  5                  10                  15

<210> 68  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 68  
 Cys Leu Arg Ser Gly Thr Gly Cys Ala Phe Gln Leu Tyr Arg Phe  
           1                  5                  10                  15

<210> 69  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 69  
 Asn Asn Phe Pro Cys Leu Arg Ser Gly Arg Asn Cys Asp Ala Gly  
           1                  5                  10                  15

<210> 70  
 <211> 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 70

Arg	Ile	Val	Pro	Asn	Gly	Tyr	Phe	Asn	Val	His	Gly	Arg	Ser	Leu
1				5					10					15

&lt;210&gt; 71

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 71

Arg	Ile	Asp	Ser	Cys	Ala	Lys	Tyr	Phe	Leu	Arg	Ser	Cys	Asp
1				5					10				

&lt;210&gt; 72

&lt;211&gt; 39

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic 5' primer

&lt;400&gt; 72

gcagcagcgg ccgcaccgtg ctggttatct tctcgcgcg

39

&lt;210&gt; 73

&lt;211&gt; 35

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic 3' primer

&lt;400&gt; 73

gcagcagtcg acaggaaaag tagcagaatc gtagg

35

&lt;210&gt; 74

&lt;211&gt; 38

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic 5'



primer

<400> 74  
gcagcagcgg ccgcatgacg tccacctgca ccaacagc

38

<210> 75  
<211> 37  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic 3'  
primer

<400> 75  
gcagcagtcg acatagacat aggggtggat gcagcac

37

<210> 76  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 76  
Ser Thr Cys Thr Asn Ser Thr Arg Glu Ser Asn Ser Ser  
1 5 10

<210> 77  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 77  
Gln Leu Leu Gln Val Thr Asn Arg Phe Ile Phe Asn Leu  
1 5 10

<210> 78  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 78  
Tyr Pro Ser Lys Met Thr Gln Arg Arg Gly Tyr Leu Leu  
1 5 10

<210> 79  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 79  
 Glu Ala Lys Asp Gly Ser Leu Lys Ala Lys Glu Gly Ser  
       1                              5                              10

<210> 80  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 80  
 Glu Gly Lys Glu Gly Ser Thr Lys Val Glu Glu Asn Ser  
       1                              5                              10

<210> 81  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 81  
 Lys Val Glu Glu Asn Ser Met Lys Ala Asp Lys Gly Arg  
       1                              5                              10

<210> 82  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 82  
 Glu Ser Leu Pro Pro Ser Arg Arg Asn Ser Asn Ser Asn  
       1                              5                              10

<210> 83

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 83

Gly	Tyr	Met	His	Lys	Thr	Ile	Lys	Lys	Glu	Ile	Gln	Asp
1				5					10			

&lt;210&gt; 84

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 84

Ser	Thr	Cys	Thr	Asn	Ser	Thr	Arg	Glu	Ser	Asn	Ser	Ser	His
1				5					10				

&lt;210&gt; 85

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 85

Thr	Gly	Thr	Ser	Glu	Ser	Ser	Val	Glu	Ala	Arg	Gly	Ser	Glu
1				5					10				

&lt;210&gt; 86

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 86

Gly	Lys	Glu	Gly	Ser	Thr	Lys	Val	Glu	Glu	Asn	Ser	Met	Lys
1				5					10				

&lt;210&gt; 87

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 87

Asp	Asp	Ile	Asn	Phe	Ser	Glu	Asp	Asp	Val	Glu	Ala	Val	Asn
1					5				10				

&lt;210&gt; 88

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 88

Pro	Pro	Lys	Glu	Asp	Ser	His	Pro	Asp	Leu	Pro	Gly	Thr	Glu
1					5				10				

&lt;210&gt; 89

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 89

Leu	Leu	Tyr	Asn	Val	Lys	Arg	His	Ser	Leu	Glu	Val	Arg	Val
1					5				10				

&lt;210&gt; 90

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic polypeptide

&lt;400&gt; 90

Ser	Leu	Pro	Pro	Ser	Arg	Arg	Asn	Ser	Asn	Ser	Asn	Pro	Pro
1					5				10				

&lt;210&gt; 91

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic

polypeptide

<400> 91

Thr Ser Thr Cys Thr Asn Ser Thr Arg Glu Ser Asn Ser Ser  
1 5 10

<210> 92

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 92

Ser Thr Arg Glu Ser Asn Ser Ser His Thr Cys Met Pro Leu  
1 5 10

<210> 93

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 93

Gly Glu Asp Asp Ile Asn Phe Ser Glu Asp Asp Val Glu Ala  
1 5 10

<210> 94

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 94

Ile Ser Leu Ala His Gly Ile Ile Arg Ser Thr Val Leu Val Ile Phe  
1 5 10 15

<210> 95

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 95

Cys Ser Met Ile Trp Gly Ala Ser Pro Ser Tyr Thr Ile Leu Ser Val  
 1 5 10 15

<210> 96

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 polypeptide

<400> 96

Met Glu Ala Lys Asp Gly Ser Leu Lys Ala Lys Glu Gly Ser Thr Gly  
 1 5 10 15

<210> 97

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 polypeptide

<400> 97

Leu Lys Ala Lys Glu Gly Ser Thr Gly Thr Ser Glu Ser Ser Val Glu  
 1 5 10 15

<210> 98

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 polypeptide

<400> 98

Lys Glu Gly Ser Thr Gly Thr Ser Glu Ser Ser Val Glu Ala Arg Gly  
 1 5 10 15

<210> 99

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 polypeptide

<400> 99

Thr Val Ala Ser Asp Gly Ser Met Glu Gly Lys Glu Gly Ser Thr Lys  
 1 5 10 15

D0047 NP

<210> 100  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 100  
His Pro Asp Leu Pro Gly Thr Glu Gly Gly Thr Glu Gly Lys Ile Val  
1 5 10 15

<210> 101  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 101  
Leu Pro Gly Thr Glu Gly Gly Thr Glu Gly Lys Ile Val Pro Ser Tyr  
1 5 10 15

<210> 102  
<211> 21  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
polypeptide

<400> 102  
Ser Val Val Ser Phe Ile Val Ile Pro Leu Ile Val Met Ile Ala Cys  
1 5 10 15

Tyr Ser Val Val Phe  
20

D0047 NP

- 1 -